

Mullane, 09/967250

Amdt., p. 7

REMARKS

Please consider provisional application No. 60/241,627 on its merits, and confirm this by initialing and returning an initialed copy of the enclosed, fresh Form PTO-1449. Even though the cited document (now as OTHER ART -- NON-PATENT LITERATURE DOCUMENTS) is a provisional application, nothing in the statute, rules, MPEP, nor accepted prosecution practice prevents such consideration and confirmation. In other cases, provisional patent applications have been cited properly for publication on issued patents.

As may apply to present claims 1 and 25, the rejection of claims 1 and 7 over Cline, US 6266929, under 35 USC 102(e) is respectfully traversed. Cline does not describe the present claimed embodiments, and, in particular, a snow stop having grooves in a cross-hatch configuration on the underside of a base member as required by claim 1, nor a snow stop adhesively affixed to a roof and having a series of holes through and grooves under its base member for ventilation of a suitable adhesive, with the holes connected with the grooves, as required by claim 25. See also, the accompanying Declaration under 37 CFR 1.132, paragraph bridging pages 2-3. Please, therefore, withdraw this rejection.

As may apply to the present claims, to include claims 1 et seq., 18 et seq., and 21 et seq., the rejection of claims 2-6 and 8 over Cline under 35 USC 103(a) is respectfully traversed. Cline does not teach nor suggest to a person of ordinary skill in the art any of the present claimed embodiments under the meaning of Sec. 103(a).

Cline discloses a one-piece snow guard made of clear plastic, which is attached to a roof through use of adhesive on the bottom of its base. Vents 31, in essence, grooves, extend inward from the side edges 9, 11 and terminate at a central region 33, 37 so as to provide for evacuation of gasses from a central channel 39. See, col. 3, lines 55-57; col. 4, lines 4-8; FIGS. 1-5. Viewed from the side, i.e., along groove length axes, these vents are triangularly-shaped, "or any other suitable shape." See, col. 3, lines 55-59; FIGS. 2, 3. Countersinks 61 may be provided in the top of the base, and may be drilled through for securing the base 3 to a roof using through fasteners (such as nails). See, the paragraph bridging cols. 4 and 5; FIGS. 1 and 2.

Nothing in Cline suggests an advantage that would motivate the ordinary artisan to formulate cross-hatched grooves as claimed hereby. Merely because the vents 31 of Cline and the grooves of the present claimed invention may serve the same general function does not make it obvious to supply the present groove configurations. The functions, however, are not the same. The basic function of the Cline vents 31, although they can be filled with squeezed-out adhesive (col. 5, ll. 15-19), is for venting the central area 39. See, col. 4, lines 6-8. Nothing in Cline teaches increased holding power from the vents 31. Without

Best Available Copy

Mullane, 09/967250

Amdt., p. 8

disclaiming possibilities of variation in groove configurations, the sizes and shapes of the grooves in the present specification on page 9, as any person skilled in the art would recognize, refers to the size and shape of each groove itself, not its configuration. Nothing is thereby indicated of a lack of criticality with respect to grooves. However, Paper No. 4 memorializes the impermissible use of attempted hindsight reconstruction of the claims, difficult as it may be to avoid in examining, using the claim limitations as a road map or guide. Moreover, the Applicant discloses superior holding power of his snow stop, and this over Cline, which was cited as background art in the present specification. See, e.g., page 3:

"The snow stop of the invention can engender better solvent evaporation from the adhesive under the base of the snow stop, ... Firmer attachment of the snow stop, and a more reliable performance and longer life, can thus be provided."

See also, page 7:

"A type of cross-hatch configuration with the grooves 31 also helps adhesive grip by increasing surface area and texture, and provides for a faster solvent escape, and hence, a faster and more complete adhesive curing."

As well, nothing in Cline suggests that holes through the base are to be provided for ventilation of a suitable adhesive so that, when applied to a roof with the adhesive, "glue-rivets" can form in the holes with cured adhesive. The features 61 of Cline are closed, and drilled for nailing only. See, col. 5, ll. 1-2. Further, none of the countersinks 61 would connect with a vent 31 if drilled through to provide a hole. In contrast, the Applicant saliently discloses on page 9 of his specification:

"Holes 30 pass through the base 10 and can be connected with grooves or slots 31. The holes 30 may be evenly spaced to allow solvents in the adhesive to dissipate quickly, and become, as it were, "glue rivets," when the adhesive keys into the holes, for a more secure application."

Compare thus, present claims 1 and 2 as well as 9-17, 21 and 23. Cline discloses none of these things. In fact, Cline teaches away from such things by leading to a large central cavity with several herringbone-configured vent grooves only, as well as holes separated from the vent grooves, which is strong evidence of unobviousness. Moreover, the present invention is being sold successfully by the Applicant. Thus, present claims 1 et seq., and 21 et seq. distinguish over Cline under Sec. 103(a).

The Examiner's attention is further directed to the Declaration under 37 CFR 1.132. This shows most significantly improved performance of the present claimed snow stop over Cline, improvements in kind not merely degree, as well as praise of the invention plus evidence of commercial success. See, pages 3-5.

Best Available Copy

Mullane, 09/967250

Amdt., p. 9

As for the round base, the Examiner correctly admits that Cline does not show the same. However, Paper No. 4 goes on to state that since the Applicant disclosed any suitable shape may be employed for snow stops, such is evidence of unobviousness. This is a manifest attempt at improper hindsight reconstruction, using the Applicant's own invention disclosure against him as if it were prior art! Moreover, that which is in the capabilities of one of ordinary skill in the art is not synonymous with obviousness. The Examiner, too, admits to appreciating the more pleasing aesthetic appearance of the snow stops with circular bases, but, again, nothing of such a nature is suggested by Cline. In fact, Cline teaches away from such a base shape by disclosing a rectangular base, which further, is strong evidence of unobviousness. What is more, an indication of criticality, if one were, for the sake of argument, required here, can be found in the present specification, on page 3, where it is stated:

"In addition, the embodiment with the round base, particularly with generally symmetrical, upstanding members at right angles to one another, can be installed readily, and occasional misplacement on the roof is less noticeable."

Compare, the Declaration under 37 CFR 1.132, page 5. As to "convex" upstanding members, in addition to the benefits verified by the Applicant, Cline is very far indeed from disclosing two intersecting upstanding members, both with convex configurations, especially those that have convex, circularly bounded outer boundaries. The Examiner admits that Cline shows a concave upstanding member (brace), but a rectangle with rounded upper corners (snow-restraining member) should not be considered "convex." Be that as it may, presuming the latter is convex, the disclosure of one convex member intersected with three concave members hardly provides the motivation required for an ordinary artisan to make the modifications sought by the Examiner. If the shape of the members can be adjusted, Cline is silent, as he is with all of his other putative broadening statements, as to how it is to be adjusted. There are other effective configurations for holding snow than a rounded circularly convex configuration, for example, a squared off rectangle or square, or a concave large-eared snow-restraining configuration would restrain more snow, however, undesirable they may otherwise be. Again, the further attempted, and highly improper hindsight reconstruction of the claimed invention is belied through Paper No. 4. Thus, claims 12-17 and 18-20 distinguish over Cline.

The reasoning set forth in Paper No. 4 is in serious error.

Please, therefore, withdraw this rejection.

None of the new claims is described by any art of record, as demonstrated above and as inspection of the same will show. For example, no art shows grooves in a cross-hatch configuration, as required by dependence on claim 1 (claims 9-17) or itself (23); a

Best Available Copy

Mullane, 09/967250

Amdt., p. 10

snow stop configured as in claim 9; a rough or textured surface also present on the underside surface, as in claims 10 and 22; a 1:2 ratio of snow-restraining member to base, as in claim 11; a round base as in claims 12-20; a snow/water/ice relief opening in each upstanding member, as in claims 14 and 17; holes connected with grooves, as in claim 21; nor grooves having trapezoidal shapes when viewed along groove length axes, as in claim 24.

Thus, the present application is in condition for allowance. Nevertheless, the Examiner is invited to call the undersigned to discuss the case, or to seek authorization for an Examiner's amendment.

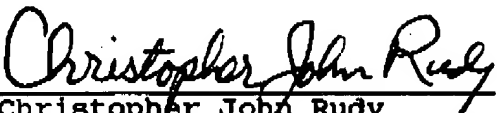
A Notice of Allowance is solicited.

Respectfully,

MICHAEL J. MULLANE

Dated: April 21, 2003 A.D.

By


Christopher John Rudy
PTO Registration No. 31,873
209 Huron Avenue, Suite 8
Port Huron, Michigan 48060
Telephone (810) 982-4221

Encls: PTO-2038
PTO-1449
Declaration under 37 CFR 1.132

Best Available Copy

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Regarding: Michael J. Mullane
Serial No. 09/967,250
Filing Date 09/26/2001
For SNOW STOP

Declaration Under 37 CFR 1.132

Attention: Group Art Unit 3615
Examiner Jennifer I. Thiesell
Supervisory Examiner Carl D. Friedman

Commissioner for Patents
Washington, D.C. 20231:

I, Michael J. Mullane, hereby state and declare as follows:

I am the inventor of the subject matter and applicant of the present patent application. I have read the 12/20/2002 Office action and the patent to Cline, No. 6,266,925 A1, and the present declaration is offered in traverse of the rejections over Cline.

I have been involved in the snow guard trade for over twenty years, first as a roofing contractor and since the early 1980s as a snow guard manufacturer; am owner/president of the M.J. Mullane Company, Inc., and have had issued as an inventor or co-inventor three utility and three design patents for various snow guards.

As presented in the Amendment which accompanies the present declaration, the present claims of my Application are as follows:

1. A snow stop comprising a base member having an underside, and a snow-restraining member connected to a top side of the base member, wherein the snow stop has a series of holes through and grooves in a cross-hatch configuration on the underside of the base member for ventilation of a suitable adhesive so that, when applied to a roof with the adhesive, "glun-rivets" can form in the holes with cured adhesive.
2. The snow stop of claim 1, wherein the holes are generally evenly spaced and are connected with the grooves, and the grooves extend to the boundary of the snow stop.
3. The snow stop of claim 2, wherein a brace supports the snow-restraining member.
4. The snow stop of claim 3, wherein the base, when viewed from a top position, is substantially in the form of a rounded square; the snow-restraining member is substantially parallel to a rear linear boundary having a length opposing a front rounded boundary of the base, is positioned between the rear linear and front rounded boundaries of the base, and extends substantially a distance equal to the length of the rear linear boundary; and the brace is substantially perpendicular to the rear linear boundary, and extends forward to the snow-restraining member.
5. The snow stop of claim 1, wherein a rough or textured surface is also present on the underside surface.

Best Available Copy

Mullane, 09/967250

Decl'n ..., p. 2

11. The snow stop of claim 1, which has a ratio of the snow-restraining member to the base member of about 1:2.
12. The snow stop of claim 1, wherein the base is round and the snow restraining member is included in intersecting, upstanding members at a predetermined angle to each other.
13. The snow stop of claim 12, wherein said angle is normal.
14. The snow stop of claim 13, wherein a snow/water/ice relief opening is in each upstanding member.
15. The snow stop of claim 2, wherein the base is round and the snow restraining member is included in intersecting, upstanding members at a predetermined angle to each other.
16. The snow stop of claim 15, wherein said angle is normal.
17. The snow stop of claim 16, wherein a snow/water/ice relief opening is in each upstanding member.
18. A snow stop comprising a base member and a snow-restraining member connected to a top side of the base member, wherein the base is round and the snow restraining member is included in intersecting, upstanding members at a predetermined angle to each other.
19. The snow stop of claim 18, wherein said angle is normal.
20. The snow stop of claim 19, wherein said upstanding members have convex, circularly bounded outer boundaries.
21. A snow stop comprising a base member having an underside, and a snow-restraining member connected to a top side of the base member, wherein a series of holes are present through the base and connected with grooves under the base member to provide for ventilation of an adhesive when adhesively applied to a roof and for "glue-rivets" in the holes with cured adhesive.
22. The snow stop of claim 21, wherein a rough or textured surface is also present on the underside surface.
23. The snow stop of claim 21, wherein the grooves are in a cross-hatch configuration, and extend to the boundary of the snow stop.
24. The snow stop of claim 21, wherein the grooves have trapezoidal shapes when viewed along groove length axes.
25. The snow stop of claim 21, in combination with and adhesively affixed to a roof.

Snow guards of the Cline patent are sold by Berger Brothers. These look just like the snow guard shown in FIGS. 1-7 of Cline.

The features 61 in the Cline patent are four countersinks in the top surface of the base 3 and not holes which extend through the base. See, the paragraph bridging columns 4-5, and FIG. 6. They may be drilled through, but this is to secure the base 3 to the roof by nails which pass through the holes. See, column 5, lines 1-2. None of the countersinks 61, even if drilled through, pass through to connect with a groove 31 on the underside of the base 3. Such countersinks, even if drilled through and nailed as taught by Cline, would not form "glue-rivets" since a nail shaft would occupy the drilled out countersink and hold the snow guard. The vents 31 of the Cline patent/Berger Brothers snow guard are

Best Available Copy

Mullane, 09/967250

Decl'n ..., p. 3

straight grooves, and none connects with another in a cross-hatch pattern. So, none of my claims 1 and 25 (which replaces canceled claim 7) nor new claim 21 is depicted nor described by Cline.

Snow stops covered by claims 1-3, 9, 10, 11 and 21-24 of my application, as Model 650 SNOW BOSS (Reg. U.S. Pat. & Tm. Off.) plastic snow stops sold by the M.J. Mullane Company, Inc., which have textured cross-hatched bases and a series of holes connected to the cross-hatched grooves, were tested in-house by me or under my direction and control in comparison to those of sold by Berger Brothers as Model CLSR plastic snow guard, which is depicted in Cline. Compare, my FIGS. 1-7 et seq., to FIGS. 1-7 of Cline.

The Model No. 650 has an overall base area of about 13 square inches, about 12-1/4 inches excluding the holes 30.

The Model CLSR has a base of about 24 square inches overall, about 12 square inches of which are low side portions 33 of the base including the vent grooves 31. These were termed "skids."

For the tests, a series of the SNOW BOSS snow stops and the CLSR snow guards were installed on sheets of 11-gage galvanized steel. The steel sheets and bases of the snow stop and snow guards were cleaned with acetone, allowed to dry, and Surebond SB-190 adhesive from a tube was applied to the entire base of the SNOW BOSS snow stops and to the skids of the CLSR snow guards. (Some CLSR snow guards had adhesive also applied to part of the middle portion 33 of the base, the results of which are reported separately. Application of the adhesive to the middle portion 33 was believed to require an excessive amount of adhesive. Also, a fair comparison of the different types of devices was obtained as the areas subject to adhesive contact were approximately equal.) A full coat of the adhesive, approximately 1/16 to 1/8 of an inch thick, was applied to the mounting surfaces of the snow stops (bottom of base) and snow guards (bottom of skids), and then the snow stops and snow guards were applied to the steel sheets using hand pressure until the adhesive was forced out from around the edges, assuring a complete seal. This process also forced the adhesive to protrude from the series of holes in the base of the SNOW BOSS snow stops, forming the so-called "glue-rivets."

Initial evaluation was conducted by hand. Mounted snow stops and snow guards were manually sheared at 12, 24 and 48 hours, 1 week, and 3 weeks. The snow stops of my invention appeared to withstand more shear, manually applied, than those of Cline, especially at the earlier times.

Further evaluation was conducted using a testing device, which was a vertically mounted load cell, placed in the center of the upward standing (snow restraining) face of the mounted snow stop or snow guard. The further evaluation was performed using 5-kg incremental loads, until failure of the adhesive bond. The following results obtained:

Best Available Copy

Mullana, 09/967280

Decl'n, p. 4

Time after mounting Observation

3 hours	SNOW BOSS #650 showed no resistance, slid off immediately with 5-kg load. CLSR showed no resistance, and slid off immediately with 5-kg load.
14 hours	SNOW BOSS #650 under 5-kg load started sliding and held 12 seconds before failure. CLSR under 5-kg load failed immediately.
24 hours	SNOW BOSS #650, 10-kg load, held over 5 minutes with no movement. CLSR, 10-kg load, held for 22 seconds, then failed.
10 days	Both products held to the maximum capacity of the test device, 50 kg, without failing.

Further, a big glob of the adhesive was applied to the middle portion 35 of a CLSR snow guard in addition to the application of adhesive as describe above to its skids 31. Tested manually, no appreciable improvement in performance was observed for this snow guard compared to CLSR snow guards with adhesive applied only to the skids 31. I believe a full fill could impede cure times.

As a conclusion, the snow stop of my invention provides for a significantly faster cure than the snow stop of Cline. As well, it demonstrated significantly better strength during curing.

The ultimate failure point of snow stops or snow guards with the fully cured adhesive applied can reasonably be assumed to be significantly increased by having one or more of the improvements from the series of holes through and grooves on the underside of the base member for ventilation of a suitable adhesive so that, when applied to a roof with the adhesive, "glue-rivets" can form in the holes with cured adhesive as in claim 21; the same with trapezoidal grooves as in claim 24; the series of holes through and a cross-hatched system of grooves on the underside of the base member for ventilation of a suitable adhesive so that, when applied to a roof with the adhesive, "glue-rivets" can form in the holes with cured adhesive as in claim 1; the same where the holes are generally evenly spaced and are connected with the grooves, and the grooves extend to the boundary of the snow stop as in claim 2; and the same with a rough or textured surface on the underside of the base as in claim 10; and so forth as in my other claims. Thus, owing in a special way to the "glue-rivets," a significantly faster adhesive cure time can be effected; and the adhesive bond formed between the roof surface and the snow stop can be significantly strengthened, with increased resistance to shear and peel forces.

Mullane, 09/967250

Decl'n, p. 5

This is confirmed by experience in the field where the snow stops of my invention have been applied. In New Hampshire, for instance, snow and/or ice from a roof took off gutters but not the Model 650 snow stops. Note, claim 28. A glue manufacturer also was highly and favorably impressed with the performance of the Model 650 snow stops, and he informed me of this.

Sales of snow stops of my present invention and application, particularly as covered by claims 1-3, 9, 10, 11 and 21-24, are starting off successfully through the M.J. Mullane Company, Inc. Sales of the Model 650 snow stop already total several thousands of dollars.

Finally, the round-based snow stop of my invention can have several significant advantages. First, especially when including the features discussed above, it can be expected to perform with adhesive application in a similar, highly effective manner. In addition to or even without such features as discussed above, the intersecting, upstanding members at a predetermined angle to each other to form the snow restraining member as in claims 12, 13 and 18, to especially include at normal angles as in claims 13, 16 and 19, can be most advantageous in the field since installation can be readily accomplished, with the occasional misplacement on the roof less noticeable than with a more square-based snow stop. Then too, the snow/water/ice relief opening in each upstanding normal-angle member as in claims 14 and 17 can help preserve roof and snow stop to roof integrity in such an already advantageous round-based snow stop. The convex, circularly bounded outer boundaries to the upstanding members as required in claim 20 may help maintain strength, and provides for an aesthetically pleasing form to include when the snow stop is occasionally misplaced.

All statements made herein of my own knowledge are true, and all statements made herein on information and belief are believed to be true. Also, these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 USC 1001, and further that such willful false statements may jeopardize the validity of the present application or any patent issuing thereon.

Dated: April 21, 2003 A.D.

Michael J. Mullane
Michael J. Mullane

Best Available Copy